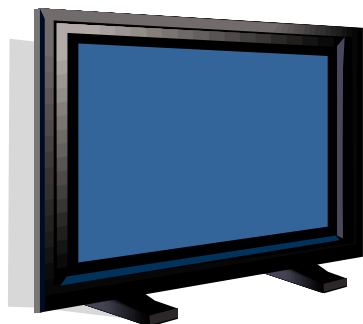




Service Repair Handbook

(based on year 2006 models)

Matsushita Electric Industrial Co., Ltd.
Panasonic AVC Networks Company
CS Promotion Cente

37/42SD 42HD	5 series	6 series	7 series	8 series	9 series
1	---	---	D	D	(D)
2	SC/SS/ SU/SD	SC/ SU/SD	SC/ SU/SD	SC/ SU/SD	P/D
3	D	D	D	D	D
4	D/P	D/P	D/P	D/P	P
5	P	P	P	P	P/D/DA
6	FAN (HD	FAN (HD only)	FAN (HD only)	FAN (HD only)	SC/D
7	---	SC	SC	SC	SC/SU/SD
8	---	---	---	---	SS
9	---	SS	SS	SS	D
10	---	---	J/PF	J/(P)	P/J/HB
11	---	---	---	---	FAN(HD
13	---	---	---	---	(DA)

50HD	5 series	6 series	7 series	8 series	9 series
1	---	---	D	D	(D)
2	SC/SS/ SU/SD/C	SC/SS	SC/SS	SS	P/D
3	D	D	D	D	D
4	D/P	D/P	D/P	D/P	P
5	P	P	P	P	P/D/DA
6	FAN	FAN	FAN	FAN	SC/D
7	---	SC/SU/SD	SC/SU/SD	SC/SU/S	SC/SU/SD
8	---	---	---	---	SS
9	---	SS	SS	SS	D
10	---	---	J/PF	J/(P)	P/J/HB
11	---	---	---	---	FAN
13	---	---	---	---	(DA)

trouble shooting case (2)	Defect phenomenon and parts (summarize chart)
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model		PX50 Series	PX500 Series	37/42 PX60	50 PX60	37/42 PX600	50 PX600
phenomenon							
Vertical line	thin	Plasma Panel					
	thick	D. C (Plasma Panel)					
	equal space	D. DG					
	as noise	D, SC, SD					
Horizontal line	upper	SU,D, SC (Plasma Panel)					
	lower	SU,D, SC (Plasma Panel)					
	middle/ lower	SS					
	all	D					
Color	one color	D, DG					
	purity	D, DG					
Synchro	V synchro	D, DG					
	H synchro	D, DG					
	V synchro shift	D, DG					
	V Amp small	D, DG					
	see duplication	D, DG					
Screen half damage	upper	SU, D (Plasma Panel)					
	lower	SD, D (Plasma Panel)					
	Left	----	----	C2	D	C2	D
	Right	----	----	C1	D	C1	D
discharge	radiation problem	SC, D (Plasma Panel)					

1. when receive service request for screen image, utilize above chart, trouble shooting guide or defect picture explanation following pages.
2. These chart or explanation of cause of problem is just possibility case. and major demand . However other cause of problem will be found in rare case.
3. To refer " diagnostic point " for understand to which area or PCB has problem or not.

trouble shooting case (2)	Defect phenomenon and parts (how to detect problem by test pattern)
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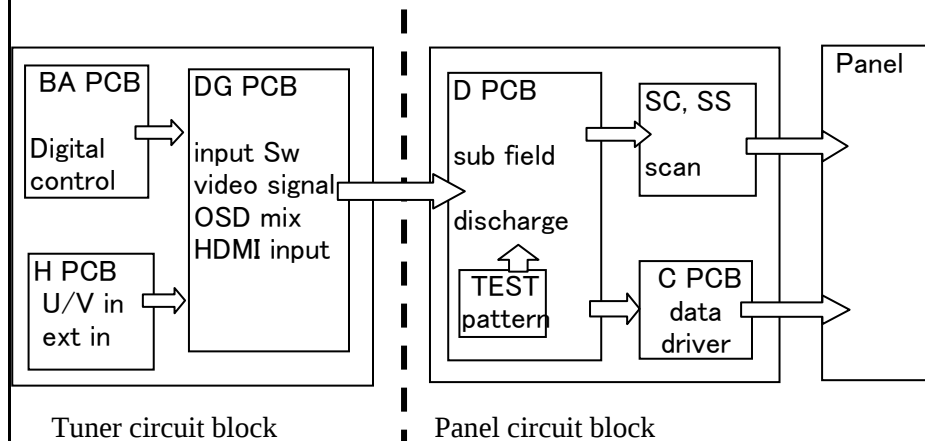
1. When phenomenon has no image (no show on screen either), " whole white pattern " indicate and diagnostic the problem also find to close problem PCB.

[Method]

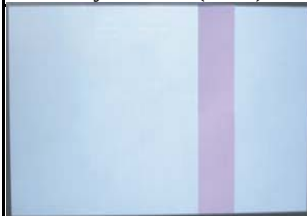
- a. Turn off the main power SW.
- b. PX600/PX60 series : disconnect DG5 connector of DG PCB.
- c. After that, turn on the main power SW, it will show white pattern.

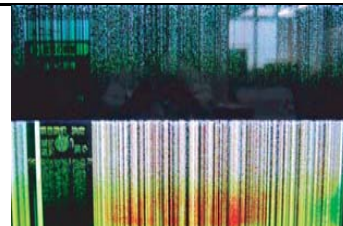
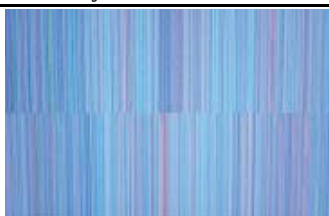
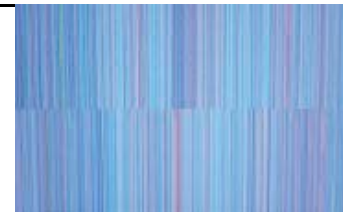
[diagnostic point]

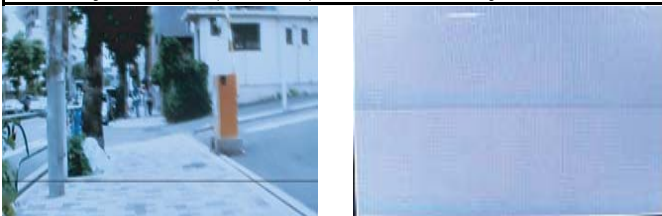
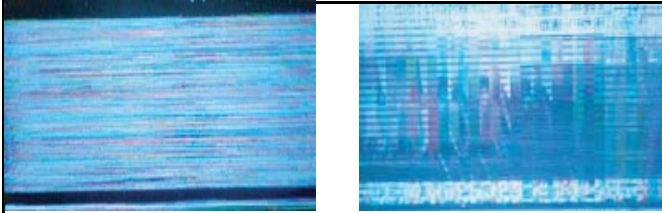
1. white pattern show on screen : Tuner circuit or DG PCB problem.
2. white pattern does not show : Plasma panel or D PCB problem (it may happened on SC PCB)

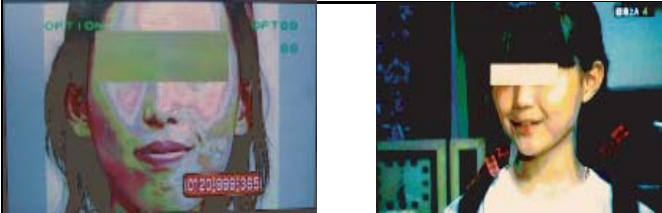


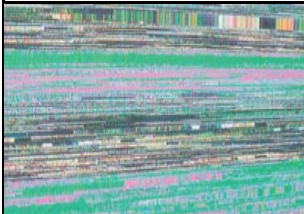
also utilize service mode function which has test pattern program in order to detect problem easily.

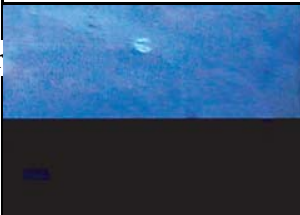
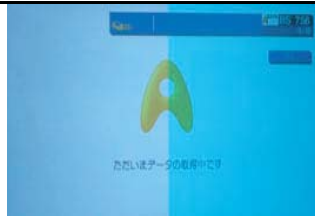
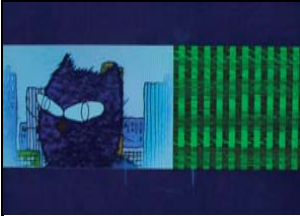
trouble shooting case (2)		Defect phenomenon and parts	
phenomenon: vertical line			
Estimated defect PCB D, DG, C PCB or Plasma Panel			
thinner vertical line	Cause by Plasma Panel	Cause by Plasma Panel	
			
thick line	Cause by D PCB (C 1)	Cause by D PCB (C 2)	
			
equal span	Cause by D PCB	Cause by DG PCB	
			
[diagnostic point]			
1. To be cautioned line size thin or thick. Depending one the size, it will cause by Panel or D PCB.			
2. Most cases will affect by D or DG PCB for equal span. It diagnostic by Test pattern indication.			

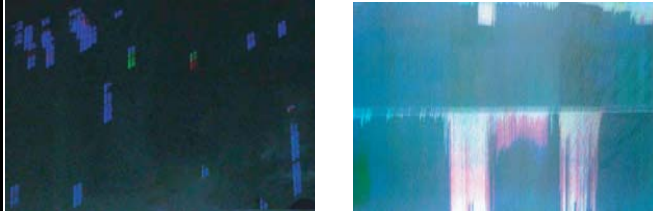
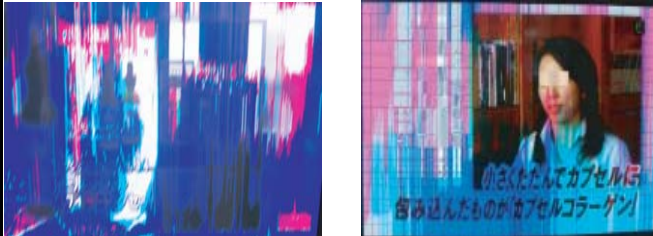
trouble shooting case (2)		Defect phenomenon and parts	
phenomenon: vertical line			
Estimated defect PCB SC, SD, SU, D PCB or Plasma Panel			
Noise	Cause by SC PCB		
			
	Cause by SD PCB		
			
	Cause by D PCB		
			
[diagnostic point] when noise shown on whole screen, it may difficult to judge and specify the cause of problem. However you can review it by SU PCB or SD PCB in order to find which PCB will be affected. Also there is case of other factor.			

trouble shooting case (2)		Defect phenomenon and parts	
phenomenon: horizontal line			
Estimated defect PCB SU, SD, SS, D PCB or Plasma Panel			
Horizontal line on upper side	Cause by SU PCB (D PCB)		Cause by D PCB (SU)
			
Horizontal line on lower side of screen	Cause by SD PCB (D PCB)		Cause by SS PCB
			
noise of Horizontal line	Cause by D PCB		Cause by D PCB
			
[diagnostic point] It can separate by phenomenon (upper or lower), however it will cause by Plasma Panel too. in case of it shows whole screen, it affected by D PCB.			

trouble shooting case (2)		Defect phenomenon and parts	
phenomenon: picture color problem			
Estimated defect PCB D, DG PCB or Plasma Panel			
monochrome error	Cause by D PCB		
Yellowish or magenta			
	Cause by DG PCB		
reddish or bluish			
purity error	Cause by D PCB		
Skin color problem			
[diagnostic point]			
It shows by monochrome or purity error. But color signal process IC is located on D and DG PCB. Either one has damaged (there is case of Plasma Panel) therefore utilize it test pattern for diagnostic.			

trouble shooting case (2)	Defect phenomenon and parts	
phenomenon: Syncro problem		
Estimated defect PCB D or DG PCB		
V syncro flow	Cause by D PCB	
		
H syncro flow (left)	Cause by D PCB	
V syncro shift (Right 9		
V amplitude small (left)	Cause by D PCB	
duplicate image (Right)		
[diagnostic point] These explanation of synchronize problem IC are relating with D PCB or DG PCB. Therefore cause by either one. Test pattern indication is recommended in order to make sure and distinguish which PCB has a problem.		

trouble shooting case (2)	Defect phenomenon and parts	
phenomenon: Screen image in Half problem		
Estimated defect PCB SD, SU, D, C, DG, BA PCB or Plasma Panel		
Screen upper or lower half problem	Cause by SD PCB	Cause by SU PCB
		
screen left or right half problem	Cause by D PCB	
		
other screen problem	cause by DG PCB (analog only)	cause by BA PCB (digital only)
		
[diagnostic point]		
1. Depending on location of damaged screen, it can identify which PCB problem. upper: SU PCB, lower: SD PCB, right/left : D or C PCB. however it will possible to cause by Plasma Panel.		
2. Sub screen problem is affected by that tuner or video signal process which is handle PCB. Then you can check by Analog or digital broadcast reception to find out more close relation PCB.		
(refer summarize chart by model)		

trouble shooting case (2)	Defect phenomenon and parts
phenomenon: discharge problem	
Estimated defect PCB SC or D PCB	
Whole screen has radiation problem	cause by SC PCB (D PCB)
	
	
	
[diagnostic point] When voltage charge does not match on scanning electrode and writing electrode, electric storage does not normal on inside cell of Panel. and it does not radiate as normal operation. therefore, 1. SC PCB what request order to scan electrode. 2. D PCB what control discharge. those factor will consider cause of problem.	

trouble shooting case (2)	Defect phenomenon and parts
phenomenon: Others	
Estimated defect PCB DG PCB	
Small screen problem	Cause by DG PCB
	TV channel program guide show and current TV program screen has problem. (ex: PX 600 case)
OSD position wrong	cause by DG PCB
	OSD indication position is wrong
[diagnostic point] 1. Current TV program screen show on TV channel program guide, it is controlled by DG PCB. 2. OSD indicate position is made by DG PCB which is analogue data.	